

What is claimed is:

1 1. A data relay apparatus connected to a relay path
2 and a communication apparatus-side path which is a
3 path toward a communication apparatus, the data
4 relay apparatus relaying data between said
5 communication apparatus and said relay path,
6 comprising:

7 transmission means for transmitting a
8 specified signal to said communication
9 apparatus-side path;

10 detection means for detecting the specified
11 signal from said communication apparatus-side
12 path; and

13 relay means for processing data received from
14 said communication apparatus-side path to relay the
15 data to said relay path, and for restoring data
16 received from said relay path to relay the data to
17 said communication apparatus-side path, when said
18 detection means cannot detect said specified
19 signal; and for relaying data received from said
20 communication apparatus-side path to said relay
21 path without processing the data, and for relaying
22 data received from said relay path to said
23 communication apparatus-side path without

24 restoring the data, when said detection means can
25 detect the specified signal.

1 2. The data relay apparatus according to claim 1,
2 wherein

3 said transmission means immediately starts a
4 processing to transmit the specified signal to said
5 communication apparatus-side path when a call is
6 received from said relay path by said data relay
7 apparatus, and starts a processing to transmit said
8 specified signal to said communication
9 apparatus-side path after said detection means
10 detects said specified signal when a call is
11 received from said communication apparatus-side
12 path by said data relay apparatus; and

13 said relay means immediately relays the data
14 received from said communication apparatus-side
15 path to said relay path without processing the data
16 and relays the data received from said relay path
17 to said communication apparatus-side path without
18 restoring the data, after said detection means
19 detects said specified signal, when a call is
20 received from said relay path by said data relay
21 apparatus, and said relay means relays the data
22 received from said communication apparatus-side
23 path to said relay path without processing the data,
24 and relays the data received from said relay path
25 to said communication apparatus-side path without

26 restoring the data, after passage of a predetermined
27 period of time after said detection means detects
28 said specified signal, when a call is received from
29 said communication apparatus-side path by said data
30 relay apparatus.

1 3. The data relay apparatus according to claim 1,
2 wherein said communication apparatus-side path is
3 a communication channel for data sending/receiving,
4 which is set between said data relay apparatus and
5 said communication apparatus.

1 4. The data relay apparatus according to claim 1,
2 wherein said relay path is a VP/VC (Virtual
3 Path/Virtual Channel) set on an ATM (Asynchronous
4 Transfer Mode) network.

1 5. The data relay apparatus according to claim 1,
2 wherein said data is voice data, and said processing
3 is a compression processing of said voice data, and
4 said restoring is an decompression processing of
5 said voice data.

1 6. A communication system having the data relay
2 apparatus according to claim 1, a communication
3 apparatus-side path connected to said data relay
4 apparatus and a communication apparatus connected
5 to said communication apparatus-side path, wherein

6 said communication apparatus is a PBX (Private
7 Branch Exchange).

1 7. A method of processing/restoring data in a data
2 relay apparatus connected to a relay path and a
3 communication apparatus-side path which is a path
4 toward a communication apparatus, the data relay
5 apparatus relaying the data between said
6 communication apparatus and said relay path,
7 wherein said data relay apparatus is allowed to
8 execute;

9 a process for transmitting a specified signal
10 to said communication apparatus-side path;

11 a process for detecting the specified signal
12 from said communication apparatus-side path; and

13 a process for processing data received from
14 said communication apparatus-side path to relay the
15 data to said relay path, and for restoring data
16 received from said relay path to relay the data to
17 said communication apparatus-side path, when said
18 specified signal cannot be detected; and for
19 relaying data received from said communication
20 apparatus-side path to said relay path without
21 processing the data, and for relaying data received
22 from said relay path to said communication
23 apparatus-side path without restoring the data,
24 when said specified signal can be detected.